

Notice of Allowability

Application No.

10/773,247

Examiner

George Eng

Applicant(s)

BINDER, YEHUDA

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/5/2004.
2. ☒ The allowed claim(s) is/are 20-54.
3. ☒ The drawings filed on 09 February 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

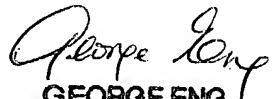
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


GEORGE ENG
PRIMARY EXAMINER

EXAMINER'S AMENDMENT AND STATEMENT OF REASONS FOR ALLOWANCE

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jay M. Finkelstein (Reg. No. 21,082) on 11/22/2004.

2. The application has been amended as follows:

20. (currently amended) An apparatus for configuring a local area network in a building for the transport of [Ethernet-based] digital data signals and analog signals across a wiring using frequency domain multiplexed analog and digital data signals, wherein the wiring includes at least first and second wiring segments each comprising at least two conductors, the apparatus comprising:

first and second ports each [connected] connectable to a respective one of said first and second wiring segments;

first and second data filters each coupled to a respective one of said first and second ports, each having a digital data signal port operative to pass only digital data signals;

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first and second modems each coupled to said digital data signal port of a respective one of said first and second filters, operative for bi-directional [Ethernet] digital data signal communication with a respective one of said first and second wiring segments;

at least one data connector operative for establishing a digital data signal connection with a data unit;

a multiport unit coupling said first and second modems to said at least one data connector for data transfer between said modems and said at least one data connector, said multiport unit being constituted by one of: a repeater; a bridge; and router;

first and second analog filters each coupled to a respective one of said first and second ports, each having a respective analog signal port, and each operative to pass only analog signals;

at least one analog connector operative for establishing an analog signal connection with an analog unit, the at least one analog connector being coupled to said analog signal port of at least one of said analog filters.

21. (previously presented) The apparatus according to claim 20, wherein the analog signals are analog telephone signals, and the analog unit is a telephone set.

22. (previously presented) The apparatus according to claim 20, wherein at least one of the wiring segments is a telephone wiring.

23. (previously presented) The apparatus according to claim 20, wherein the apparatus is at least partially housed within an outlet.

24. (previously presented) The apparatus according to claim 20, further comprising at least one power consuming component connected to at least one of the wiring segments and powered by a power signal carried by the at least one of the wiring segments.

25. (currently amended) The apparatus according to claim 24, wherein the power signal is carried in a frequency spectrum distinct from the analog and digital data signals.

26. (previously presented) The apparatus according to claim 21, wherein the power signal is an alternating current signal.

27. (currently amended) The apparatus according to claim 20, wherein:
the digital data signals carried over at least one of the wiring segments include a plurality of time division multiplexed data channels;
said apparatus further comprises a plurality of data connectors each operative for establishing a digital data signal connection with a data unit;
said data connectors are each coupled to the multiport unit; and
said apparatus is operative for coupling each data unit to a distinct data channel.

28. (currently amended) The apparatus according to claim 20, wherein:
the digital data signals carried over at least one of the wiring segments include a plurality frequency division multiplexed data channels;

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said apparatus further comprises a plurality of data connectors each operative for establishing a digital data signal connection with a data unit;

said data connectors are each coupled to the multiport unit; and

said apparatus is operative for coupling each data unit distinct data channel.

29. (previously presented) The apparatus according to claim 20, wherein said apparatus is attachable to a wall a building.

30. (previously presented) The apparatus according to claim 20, wherein said analog signal ports of said first and second analog filters are coupled to one another.

31. (currently amended) A network for transporting digital data and analog signals, said network comprising:

first, second and third nodes; and

first and second wiring segments in a building, each comprising at least two conductors for simultaneously carrying frequency domain multiplexed digital data and analog signals, wherein:

said first wiring segment connects said first and second nodes together to form, with said first and second nodes, a first [Ethernet] bi-directional digital communication link;

said second wiring segment connects said first and third nodes together to form, with said first and third nodes, a second [Ethernet] bi-directional digital communication link;

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each of said nodes is connectable to at least one data unit for coupling the connected data unit at least one of said communication links;

each of said nodes connectable at least one analog unit for coupling the analog unit to the analog signals carried over at least one of said wiring segments;

said first node contains a coupling unit coupling said first and second communication links together; and

said coupling unit is one of: a repeater; a bridge; and a router.

32. (previously presented) The network according to claim wherein at least one of said nodes is at least in part included in an outlet.

33. (currently amended) [the] The network according to claim 31, wherein at least one of said nodes is included in a telephone outlet.

34. (previously presented) The network according to claim 31, wherein least one of said wiring segments is constituted by wiring previously installed in the building.

35. (previously presented) The network according to claim 31, wherein at least one of the wiring segments is constituted by telephone wiring.

36. (previously presented) The network according to claim 31, wherein at least one of the analog signals is a telephone signal and at least one of the analog units is a telephone unit.

37. (previously presented) The network according to claim 31, wherein least one of the nodes comprises a power consuming component connected to at least one of said wiring segments and powered by a power signal carried by said at least one of the wiring segments.

38. (currently amended) The network according to claim 37, wherein the power signal is carried in a frequency spectrum distinct from the analog and digital data signals.

39. (previously presented) The network according to claim 37, wherein the power signal is an alternating current signal.

40. (currently amended) The network according to claim 31, wherein:
the digital data signals carried over at least one of said wiring segments include a plurality of time division multiplexed data channels;
one of said nodes connected to said at least one of said wiring segments further comprises a plurality of data connectors each operative for establishing a data signal connection with a data unit;
said data connectors are each coupled to said coupling unit; and
said one of said nodes connected to said at least one of said wiring segments is operative for coupling each data unit to a distinct data channel.

41. (currently amended) The network according to claim 31, wherein:

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the digital data signals carried over at least one of said wiring segments include a plurality of frequency division multiplexed data channels;

one of said nodes connected to said at least one of said wiring segments further comprises a plurality of data connectors each operative for establishing a data signal connection with a data unit;

said data connectors are each coupled to said coupling unit; and

said one of said nodes connected to said at least one of said wiring segments is operative for coupling each data unit distinct data channel.

42. (previously presented) The network according to claim 31, wherein at least one of said nodes is connected to an analog unit located external to the building.

43. (previously presented) The network according to claim 31, wherein at least one of said nodes is connected to a data unit located external the building.

44. (currently amended) A network for transporting digital data and telephone signals, said network comprising:

first, second and third nodes; and

first and second wiring segments in a building, each comprising at least two conductors for carrying digital data signals;

wherein:

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said first wiring segment connects said first and second nodes together to form, with said first and second nodes, a first [Ethernet] bi-directional communication link;

said second wiring segment connects said first and third nodes together to form, with said first and third nodes, a second [Ethernet] bi-directional communication link;

said first node contains a coupling unit coupling said first and second communication links together;

said coupling unit is one of: a repeater; bridge; and a router;

each of said nodes is connectable to at least one data unit for coupling the connected data unit to at least one of said communication links;

at least one of said nodes is coupled to a remote data unit external to the building;

at least one of said nodes is coupled to a remote telephone service unit external to the building; and

said network further transports at least one telephone signal between the remote telephone service unit and at least one telephone device coupled to at least one of said nodes.

45. (previously presented) The network according to claim 44, wherein at least one of said nodes is at least in part included in an outlet.

46. (currently amended) [the] The network according to claim 44, wherein at least one of said nodes is included in a telephone outlet.

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47. (previously presented) The network according to claim 44, wherein least one of the wiring segments is constituted by wiring previously installed in the building.

48. (previously presented) The network according to claim 44, wherein at least one of said wiring segments is constituted by telephone wiring.

49. (previously presented) The network according to claim 44, wherein the telephone signals are digitized telephone signals.

50. (previously presented) The network according to claim 44, wherein at least one of the nodes comprises a power consuming component connected to at least one of said wiring segments and powered by a power signal carried by said at least one of said wiring segments.

51. (currently amended) The network according to claim 50, wherein the power signal is carried in a frequency spectrum distinct from the digital data and telephone signals.

52. (previously presented) The network according to claim 50, wherein the power signal is an alternating current signal.

53. (currently amended) The network according to claim 44, wherein:
the digital data signals carried over at least one of said wiring segments includes a plurality of time division multiplexed data channels;

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one said nodes connected to said at least one of said wiring segments further comprises a plurality of data connectors each operative for establishing a data signal connection with a data unit;

said data connectors are each coupled to said coupling unit; and

said one of said nodes connected to said at least one of said wiring segments operative for coupling each data unit to a distinct data channel.

54. (currently amended) The network according to claim 44, the digital data signals carried over at least one of said wiring segments include a plurality of frequency division multiplexed data channels;

one of said nodes connected to said at least one of said wiring segments further comprises a plurality of data connectors each operative for establishing a data signal connection with a data unit;

said data connectors are each coupled to said coupling unit; and

said one of said nodes connected to said at least one of said wiring segments is operative for coupling each data unit to a distinct data channel.

Examiner's Statement of Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance:

Applicant's invention is drawn to a local area network using the telephone wiring within a residence or other building simultaneously with telephony signals by modified or substituted regular outlets to allow splitting of the telephone line having two wires into segments such that

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each segment connecting two outlets is fully separated from all other segment, thereby offering a potential for the improved data transport and distribution performance of a point-to-point network topology, while still allowing a bus type data network topology in all or part of the network (i.e., a network for telephony and digital data communication including at least one electrically-conductive segment containing at least two distinct electrical conductors operative to conducting a low-frequency telephony band and at least one high-frequency data band, each of the segments having a respective first end and a respective second end, a first low pass filter connected in series to the respective first end of each of the segments, for establishing a low-frequency path for the low-frequency telephony band, a second low pass filter connected in series to the respective second end of each of the segments, for establishing a low-frequency path for the low-frequency telephony band, a first high pass filter connected in series to the respective first end of each of the segments, for establishing a high-frequency path for the at least one high-frequency data band, a second high pass filter connected in series to the respective second end of each of the segments, for establishing a high-frequency path for the at least one high-frequency data band, and at least two outlets each operative to connecting at least one telephone device to at least one of the low-frequency paths, and at least two of the at least two outlets being operative to connecting at least one data device to at least one of the high-frequency).

Applicant's independent claim 20 recites, *inter alia*, an apparatus for configuring a local area network in a building for the transport of digital data signals and analog signals across a wiring using frequency domain multiplexed analog and digital data signals with a structure as defined in the specification including first and second ports each connectable to a respective one of said first and second wiring segments, first and second modems each coupled to said digital

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data signal port of a respective one of said first and second filters, operative for bi-directional digital data signal communication with a respective one of said first and second wiring segments, a multiport unit coupling said first and second modems to said at least one data connector for data transfer between said modems and said at least one data connector, said multiport unit being constituted by one of: a repeater; a bridge; and router, and first and second analog filters each coupled to a respective one of said first and second ports, each having a respective analog signal port, and each operative to pass only analog signals. Applicant's independent claim 20 comprising a particular combination of the elements, which is neither taught nor suggested by the prior art.

Applicant's independent claims 31 and 44 each recite, *inter alia*, said network comprising first, second and third nodes, and first and second wiring segments in a building, each comprising at least two conductors for simultaneously carrying frequency domain multiplexed digital data and analog signals, wherein said first wiring segment connects said first and second nodes together to form, with said first and second nodes, a first bi-directional digital communication link, said second wiring segment connects said first and third nodes together to form, with said first and third nodes, a second bi-directional digital communication link, each of said nodes is connectable to at least one data unit for coupling the connected data unit at least one of said communication links, each of said nodes connectable at least one analog unit for coupling the analog unit to the analog signals carried over at least one of said wiring segments, said first node contains a coupling unit coupling said first and second communication links together; and said coupling unit is one of: a repeater; a bridge; and a router. Applicant's

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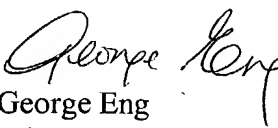
independent claims 31 and 44 comprising a particular combination of the elements, which is neither taught nor suggested by the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Eng whose telephone number is 703-308-9555. The examiner can normally be reached on Tue-Fri 7:30 AM-6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A. Kuntz can be reached on 703-305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


George Eng
Primary Examiner
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